Energy, Environment and Sustainability of Green Buildings

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3.1 INTRODUCTION

Air pollution has been an issue ever since the industrial revolution, and hence a significant factor that aggravates the environment and the quality of our life in an exponential rate. In metropolitan cities, its threats are harmful to human, plant, animal life, property, or which reasonably interfere with the comfort of life and property. These pollutants are generated from different sources that generally classified as follows:

1- Energy industrial combustion, such as coal-fired power plants.
2- Transportation facilities (cars, trucks, motorcycles, and ...etc).
3- Manufacturing processes and combustion.
4- Residential fuel combustion
5- Waste disposal.
6- Road and construction dust.
7- Natural sources.

Pollutants are generated from burning fossil fuel process (such as coal, gas, oil, and.....etc). One of these sources is illustrated in Figure 18.The common pollutants generating from burning of fossil fuels are {Fine Particulate Matter (PM2.5 & PM10), Ozone (O3), Carbon Monoxide (CO), Sulfur Dioxide (SO2), Lead, and Nitrogen Dioxide (NO2)}, that every kind of them affecting human health and environment directly or indirectly when chemically reacted by solar and becomes a secondary pollutant. This report concentrates on pollutants generated from coal-fired power plants.